

Coast Guard, DHS

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(G) Use of radar in maintaining situational awareness.

(ii) Plotting (by any graphically-correct method):

(A) Principles and methods of plotting relative and true motion.

(B) Practical-plotting problems.

(5) Radar Observer (Inland Waters and GIWW: Renewal). Classroom instruction—including demonstration and practical exercises using simulators—and examination, in the interpretation and analysis of radar information, including:

(i) Radar navigation (including visual techniques—determining positions, and detecting changes in the relative motion, of other vessels.

(ii) Collision-avoidance, including visual techniques, appropriate to the circumstances and the equipment in use.

(iii) Determining the course and speed of another vessel.

(iv) Determining the time and distance of closest point of approach of a crossing, meeting, overtaking, or overtaken vessel.

(v) Detecting changes of course or speed of another vessel after its initial course and speed have been established.

(vi) Applying the Navigational Rules, and other factors to consider when determining changes of course or speed of a vessel to prevent collisions on the basis of radar observation.

(vii) Use of radar in maintaining situational awareness.

(6) Radar Observer (Rivers: Renewal). Classroom instruction—including demonstration and practical exercises using simulators—and examination, in the interpretation and analysis of radar information, including:

(i) Radar navigation (including visual techniques)—determining positions, and detecting changes in the relative motion, of other vessels.

(ii) Collision-avoidance, including visual techniques, appropriate to the circumstances and the equipment in use.

(iii) Applying the Navigational Rules, and other factors to consider when determining changes of course or speed of a vessel to prevent collisions on the basis of radar observation.

(iv) Use of radar in maintaining situational awareness.

[CGD 94-041, 62 FR 11303, Mar. 11, 1997]

§ 10.306 Radar-Operation course and certificate.

(a) A certificate of training from a Radar-Operation course may, as provided by 46 CFR 15.815(c)(2), suffice instead of a Radar-Observer endorsement. It is valid until the holder's license is renewed or upgraded, or expires, whichever occurs first.

(b) Each Radar-Operation course must contain at least 4 hours of instruction on the following subjects:

(1) Fundamentals of radar:

(i) How radar works.

(ii) Factors affecting the performance and accuracy of marine radar.

(iii) Purpose and functions of the main components that constitute a typical marine-radar system.

(2) Operation and use of radar:

(i) Purpose and adjustment of controls.

(ii) Detection of malfunctions, false and indirect echoes, and other radar phenomena.

(iii) Effects of sea return, weather, and other environmental conditions.

(iv) Limitations of radar resulting from design factors.

(v) Safety precautions associated with use and maintenance of marine radar.

(vi) Measurement of ranges and bearings.

(vii) Effect of size, shape, composition, and distance of vessels and terrestrial targets on echo.

(3) Interpretation and analysis of radar information:

(i) Radar navigation—determining the position and direction of movements of a vessel.

(ii) Collision-avoidance, including visual techniques, appropriate to the circumstances and the equipment in use.

(iii) Applying the Navigational Rules, Chapters 30 and 34 of Title 33 U.S. Code [Commandant Instruction M16672.2C or equivalent, as amended], and other factors to consider when determining changes of course or speed of a vessel to prevent collisions on the basis of radar observation.

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(c) Each Radar-Operation course must be conducted by a person who possesses the knowledge and skills taught in the course, with at least one year of experience in their practical application, except that—

(1) A marine instructor or company official may substitute a currently valid certificate from an approved Radar-Observer course (Unlimited, or Inland Waters and GIWW) for the one year of experience; and

(2) An instructor of any approved Radar-Observer course may teach a Radar-Operation course without further seagoing experience.

(d) When a holder of the Radar-Operation certificate seeks a Radar-Observer endorsement, he or she is an applicant for an original endorsement rather than for renewal of an endorsement.

[CGD 94-041, 62 FR 11304, Mar. 11, 1997]

§ 10.307 Training schools with approved radar observer courses.

The Commanding Officer, National Maritime Center, NMC-4B, 4200 Wilson Boulevard, Suite 510, Arlington, VA 22203-1804 maintains the list of approved schools and specific courses. This information is available upon request by writing the aforementioned address or calling (703) 235-1300.

[CGD 81-059, 52 FR 38623, Oct. 16, 1987 and CGD 81-059, 54 FR 132, Jan. 4, 1989, as amended by CGD 95-072, 60 FR 50460, Sept. 29, 1995; USCG-1998-4442, 63 FR 52189, Sept. 30, 1998]

§ 10.309 Coast Guard-accepted training other than approved courses.

(a) When the training and assessment of competence required by this part are not subject to Coast Guard approval under § 10.302, but are used to qualify to hold an STCW certificate or endorsement for service on or after February 1, 2002, such training and assessment must meet the following requirements:

(1) The training and assessment must have written, clearly defined objectives that emphasize specific knowledge, skills, and abilities, and that include criteria to be used in establishing a student's successful achievement of the training objectives.

(2) The training must be set out in a written syllabus that conforms to a

Coast Guard-accepted outline for such training and includes—

(i) The sequence of subjects to be covered;

(ii) The number of hours to be devoted to instruction in relevant areas of knowledge;

(iii) The identity and professional qualifications of the instructor(s) to be conducting the training or providing instruction;

(iv) The identification of other media or facilities to be used in conducting training; and

(v) Measurements at appropriate intervals of each candidate's progress toward acquisition of the specific knowledge, skills, and abilities stated in the training objectives.

(3) Except as provided in paragraph (a)(4) of this section, documentary evidence must be readily available to establish that all instructors—

(i) Have experience, training, or instruction in effective instructional techniques;

(ii) Are qualified in the task for which the training is being conducted; and

(iii) Hold the level of license, endorsement, or other professional credential required of those who would apply on board a vessel the relevant level of knowledge, skills, and abilities described in the training objectives.

(4) Neither a specialist in a particular field of nonmaritime education, such as mathematics or first aid, nor a person with at least 3 years of service as a member of the Armed Forces of the United States, specializing in the field in which he or she is to conduct training, need hold a maritime license or document to conduct training in that field.

(5) A simulator may be used in training if—

(i) The simulator meets applicable performance standards;

(ii) The instructor has gained practical operational experience on the particular type of simulator being used; and

(iii) The instructor has received appropriate guidance in instructional techniques involving the use of simulators.